



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: GE90-90B BYPASS RATIO: 8.4
 UNIQUE ID NUMBER: 9GE123 PRESSURE RATIO (π_{00}): 40.3
 COMBUSTOR: PEC
 ENGINE TYPE: TF RATED THRUST (F_{00}) (kN): 410.8

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D _p /F ₀₀ (g/kN) or SN	4.9	44.1	82.2	3.1
AS % OF ORIGINAL LIMIT	24.8	37.4	68.1	19.0
AS % OF CAEP/2 LIMIT (NO _x)			85.2	
AS % OF CAEP/4 LIMIT (NO _x)			93.8	
AS % OF CAEP/6 LIMIT (NO _x)			103.3	
AS % OF CAEP/8 LIMIT (NO _x)			116.2	

DATA STATUS

- PRE-REGULATION
 x CERTIFICATION
 - REVISED (SEE REMARKS)

TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES
 x DEDICATED ENGINES TO PRODUCTION STANDARD
 - OTHER (SEE REMARKS)

EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE
 (ANNEX 16 VOLUME II)

CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)
 x OUT OF PRODUCTION (DATE: -)
 - OUT OF SERVICE (DATE: -)

MEASURED DATA

MODE	POWER SETTING (%F ₀₀)	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO _x	
TAKE-OFF	100	0.7	3.436	0.05	0.33	53.58	2.4
CLIMB OUT	85	2.2	2.784	0.04	0.32	41.82	0.8
APPROACH	30	4.0	0.899	0.05	1.54	16.24	1.0
IDLE	7	26.0	0.300	2.71	30.50	5.41	1.0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1195	1298	14766	29136	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D _p /F ₀₀ (g/kN) or AVERAGE SN (MAX)				3.2	35.9	70.9	2.4
SIGMA (D _p /F ₀₀ in g/kN, or SN)				0.3	1.1	0.5	0.8
RANGE (D _p /F ₀₀ in g/kN, or SN)				2.96-3.5	35.1-37.22	70.41-71.49	1.54-3.17

ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT All POWER SETTINGS
 STAGE BLEED 0 (% CORE FLOW) AT All POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	98.4-98.7
TEMPERATURE (K)	277.2-281.3
ABS HUMIDITY (kg/kg)	0.0015-0.0043

FUEL

SPEC	Jet A-1
H/C	
AROM (%)	15-16

MANUFACTURER: General Electric Company
 TEST ORGANIZATION: General Electric Peebles Test Operation
 TEST LOCATION: Site 6A
 TEST DATES: 30/11/2007-08/12/2007

REMARKS

- GE Aviation Report R2007AB851
- Engine serial number 900-505/1
- Turbomachinery incorporating 2D aero
- Performance Enhanced Combustor (PEC)

Compliance with Fuel Venting requirements: x ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)